

REMARKS

Please reconsider this application in view of the following remarks. Applicant thanks the Examiner for carefully reviewing this application.

Disposition of Claims

Claims 11, 13-18, and 21 are pending in this application. Claim 11 is independent. The remaining claims depend, directly or indirectly, from claim 11.

Rejections under 35 U.S.C. § 103

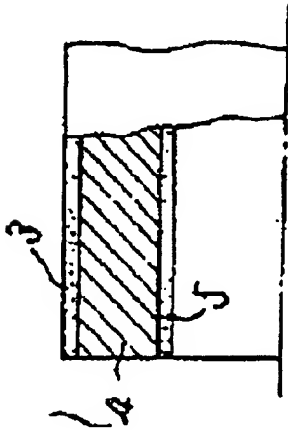
Rejection of Claims 11, 13-18, and 21

Claims 11, 13-18, and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Applicant's admitted prior art ("APA") in view of Japanese Patent 3-260413 ("413 Patent") and U.S. Patent No. 4,171,626 ("Yates"). This rejection is respectfully traversed.

Of the rejected claims, claim 11 is independent. Claim 11 recites a method for making a wound fiber reinforced plastic article including winding at least one single material fiber over a liner and winding a plurality of hybrid fiber layers over the at least one single fiber layer. Each hybrid fiber layer is wound in an opposed lay direction to the previously wound hybrid fiber layer, wherein the at least one single material fiber layer and the plurality of hybrid fiber layers are impregnated with resin.

Wound fiber reinforced plastic tubings are disclosed in the background section of the present specification as the APA. The wound fiber reinforced plastic tubing in the APA is formed from a hybrid layer of carbon fiber and glass that is disposed on top of a thermoplastic

liner. As noted by The Examiner on page 2 of the Office Action dated September 8, 2005, the APA does not include a tubing provided with an interior layer of glass fiber, wherein the interior layer is formed only of glass fiber and then have an additional layer of hybrid material applied onto the same.



As shown in the included figure, the '413 Patent discloses a fiber reinforced plastic drive shaft formed by winding and molding two or more kinds of reinforced fibers simultaneously as a hybrid layer 4 at a specific angle in the axial direction of a pipe. The '413 Patent then optionally includes the use of glass fiber layers 3 and 5 on the outermost and innermost surfaces of the drive shaft for improved impact resistance and deterioration prevention.

One of ordinary skill in the art would have no motivation to combine the two references of the APA and the '413 Patent in any way that would then anticipate claim 11 of the present invention. As recited in claim 11, a single material fiber layer is wound over a liner, with hybrid fiber layers wound over the single material fiber layer. The '413 Patent is silent on the use of a liner altogether, and thus needs to be combined with the APA to have all of the limitations of claim 11 in order to render obvious claim 11. However, the innermost glass fiber layer in the '413 Patent is used for deterioration prevention from electrolytic corrosion within the inner diameter of the drive shaft. If a liner from the APA was further included inside the already innermost glass fiber layer surface of the '413 Patent, the glass fiber layer would not be able to protect the drive shaft from electrolytic corrosion. Thus, one of ordinary skill in the art would have no motivation to combine the two references of the APA and the '413 Patent to anticipate

claim 11 because the innermost glass fiber layer would not then not be capable of serving its purpose of deterioration prevention.

Further, the present application *cannot be used a guide* in reconstructing elements of prior art references to render the claimed invention obvious. *See In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (emphasis added). Prior art references cannot merely be combined to render a claimed invention obvious by merely showing that all the limitations of the claimed invention are found in the proposed combination. Instead, there must be a suggestion or motivation to combine the references within the prior art references themselves. Regardless of whether prior art references can be combined, there must an indication within the prior art references *expressing desirability* to combine the references. *See In re Mills*, 916 F.2d 680 (Fed. Cir. 1990) (emphasis added). There is no suggestion in the '413 Patent for the use of a liner within the drive shaft, and thus, one skilled in the art provided with the teachings of the APA and the '413 Patent would have no motivation to combine the two references to anticipate the present invention.

With respect to Yates, the Examiner asserts that Yates supports the position that the drive shaft having the hybrid fibers in the '413 Patent in fact has multiple fiber layers disposed at opposite angles therein. However, Yates does not provide that which the '413 Patent lacks, with respect to claim 11. Specifically, Yates does not show the use of a single material fiber layer wound over a liner, with hybrid fiber layers wound over the single material fiber layer, nor does Yates provide support to combine the APA and the '413 Patent with respect to the above arguments.

In view of the above, the APA, the '413 Patent, and Yates, whether considered separately or in combination, fail to show or suggest the present invention as recited in claim 11.

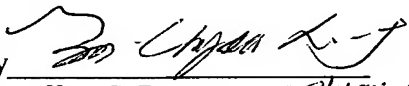
Thus, claim 11 is patentable over the APA, the '413 Patent, and Yates. Claims 13-18, and 21, which depend from claim 11, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 17193/006002).

Dated: March 14, 2006

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Attachments